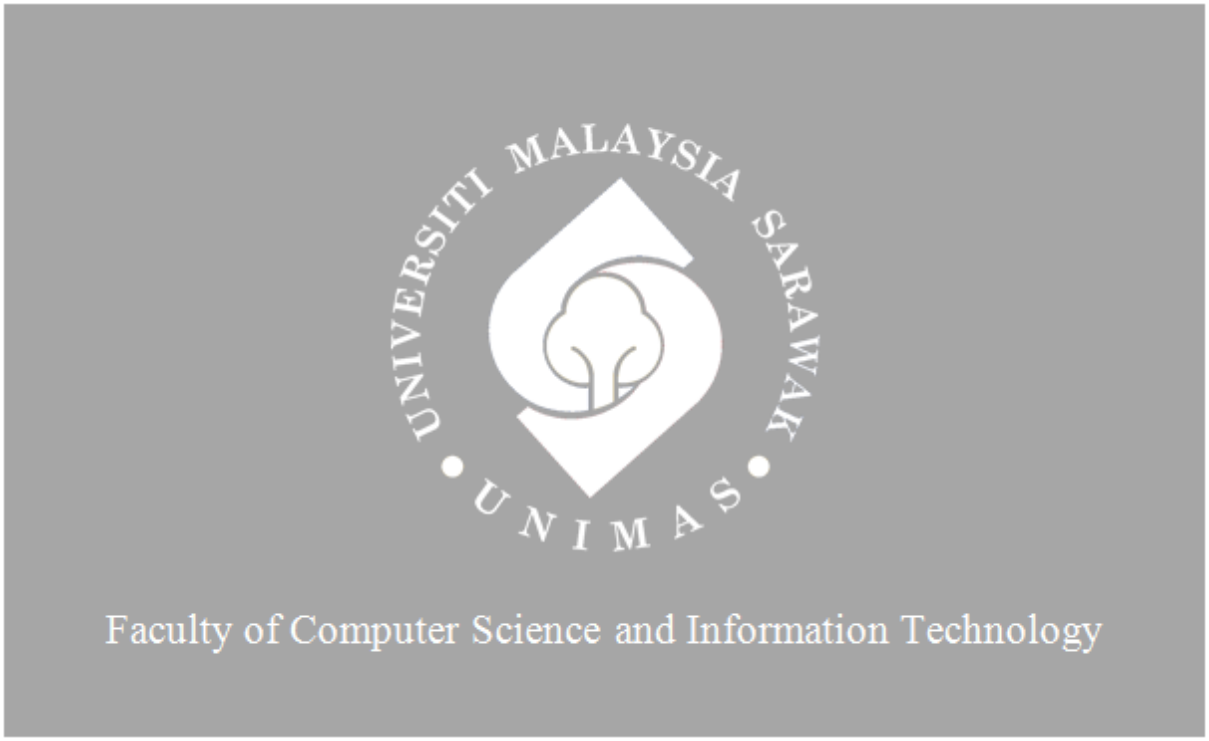

DiLet: A Website to Let-Go Stuff

Nur Hidayah Binti Badrun Hisyam

Bachelor of Computer Science with Honours (Software Engineering)
2019

DiLet: A Website to Let-Go Stuff

Nur Hidayah Binti Badrun Hisyam

This project is submitted in partial fulfilment of the
requirements for the degree of
Bachelor of Computer Science with Honours
(Software Engineering)

Faculty of Computer Science and Information Technology
UNIVERSITI MALAYSIA SARAWAK
2020

UNIVERSITI MALAYSIA SARAWAK

THESIS STATUS ENDORSEMENT FORM

TITLE DILET: A WEBSITE TO LET-GO STUFF

ACADEMIC SESSION: 2019/2020

(CAPITAL LETTERS)

hereby agree that this Thesis* shall be kept at the Centre for Academic Information Services, Universiti Malaysia Sarawak, subject to the following terms and conditions:

1. The Thesis is solely owned by Universiti Malaysia Sarawak
2. The Centre for Academic Information Services is given full rights to produce copies for educational purposes only
3. The Centre for Academic Information Services is given full rights to do digitization in order to develop local content database
4. The Centre for Academic Information Services is given full rights to produce copies of this Thesis as part of its exchange item program between Higher Learning Institutions [or for the purpose of interlibrary loan between HLI]
5. ** Please tick (√)

☐	CONFIDENTIAL	(Contains classified information bounded by the OFFICIAL SECRETS ACT 1972)
☐	RESTRICTED	(Contains restricted information as dictated by the body or organization where the research was conducted)
☑	UNRESTRICTED	

(AUTHOR'S SIGNATURE)

Validated by

(SUPERVISOR'S SIGNATURE)

Permanent Address

NO:116, JALAN BP 1/6, TAMAN
BANGGOL PERMAI, 24000
KEMAMAN, TERENGGANU.

Date: 05/08/2020

Date: 06/08/2020

Note * Thesis refers to PhD, Master, and Bachelor Degree
** For Confidential or Restricted materials, please attach relevant documents from relevant organizations / authorities

DECLARATION

I here declare that this project is my original work. I do not copy from any other students or from other sources, except for due reference or acknowledgement is not made explicitly in the text, nor has any part has been written for me by another person.

_____

Nur Hidayah Binti Badrun Hisyam
Faculty of Computer Science and Information Technology
University Malaysia Sarawak

ACKNOWLEDGEMENT

Firstly, praises and thanks to Allah S.W.T for blessing me with the opportunity to complete the project on time.

I would like to thank my supervisor Dr Azman Bin Bujang Masli for his assistance and dedicated involvement in every phase of this project. This project able to complete because of the guidance from him. I would also like to thank him for spending his time and be patient with me through my project. Not only that, his also marking and monitoring my progress despite his busy schedule.

I also want to show my gratitude to the coordinator of the Final Year Project course, Prof. Wang Yin Chai for his guidance by explaining the draft idea about every chapters. He also gives some tips for me to become the guide to complete this project.

Besides that, I would like to thank my parents who has been supporting me in moral. They always motivate me that I can complete this project.

Special mentioned to Imaan Aisyah Binti Kassim because supporting me to complete this project. She sometimes shares the tips and help me to check my grammar. Not only that, I also would like to thank Nur Amani Najwa Binti Mohd Nazhir for helping me and guide me to complete every chapters. She also gives me some ideas to complete every task. I also want to thank to Mohd Farizy Bin Mohain for guide me how to complete the report and give me some knowledge about the open source software and hardware. I want to thank Muhammad Zahid bin Muhamad Yew for share some knowledge and give the tips about the current framework.

Finally, I would to other students in UNIMAS that has giving me some tips and reminded me about the progression of this project. I would like to thank all those who have contributed and helped me in any way, whether directly or indirectly.

ABSTRACT

Nowadays, the numbers of university in Malaysia has become increasing and become demand. This is because every year, all the university will receive the new intake in every first semester. However, same goes to the final year students who will be graduated. The graduation event is one of the important events for every university. In order to graduate and take the new intake, the final year students need to carry away all their stuff before the end of the semester. Some of the final year students has the transportations or easy to carry all their item but some of them were not lucky as they are. The students who are face the problems cannot carry away all their item will make a solution to leave their item at the current hostel or college, pass down their item to junior or the easiest way is just throw away their item. In this project, a DiLet system is the platform for let go of item especially for UNIMAS the process of this project is done by following the Agile approach methodology which are Rapid Applications Development. The method is chosen because of the flexibility it offers for short duration projects. This project adds enhancement to existing let go item system by providing display interfaces. Thus, the prototype can benefit the user by conveying information audially and visually.

ABSTRAK

Pada masa kini, bilangan universiti di Malaysia semakin meningkat dan menjadi permintaan ramai. Hal ini kerana, setiap tahun universiti akan menerima pelajar pengambilan baru pada setiap semester satu. Bagaimanapun, perkara yang sama berlaku kepada pelajar tahin akhir yang akan menamatkan pengajian. Majlis graduasi bagi pelajar tahun akhir merupakan majlis penting untuk setiap universiti. Untuk graduan dan bakal menerima pengambilan baru, pelajar tahun akhir diwajibkan untuk mengankut segala barang-barang peribadi sebelum tamat tempoh pengajian. Sesetengah daripada pelajar mempunyai kenderaan dan mudah untuk mereka untuk mengangkut segala peralatan mereka. Bagi pelajar yang mempunyai masalah untuk mengangkut barang mereka, mereka akan menggunakan cara yang mudah seperti memberi barang mereka kepada pelajar baru, tinggalkan barang mereka di tempat tinggal mereka seperti kolej atau rumah sewa atau cara yang paling mudah dan cepat adalah pelajar tahun akhir membuang barang mereka. Dalam projek ini, sistem DiLet adalah platform untuk melepaskan barangan terutamanya untuk UNIMAS proses projek ini dilakukan dengan mengikuti metodologi pendekatan Agile yang Pembangunan Aplikasi Rapid. Kaedah ini dipilih kerana fleksibiliti yang ditawarkan untuk projek jangka pendek. Projek ini menambah peningkatan kepada sistem halus yang sedia ada dengan menyediakan antara muka paparan. Oleh itu, prototaip boleh memberi manfaat kepada pengguna dengan menyampaikan maklumat secara visual.

TABLE OF CONTENT

List of Tables

List of Figures

Chapter 1: Introduction

1.1 Project Title

DiLet: A website to Let-Go stuff. DiLet is a web-based system to let go the item and belongings. The name DiLet is come from “Dispose” and “Let go” which means to give or sell the second-hand item to others who are in needs.

1.2 Introduction/Background

Every year, there are many students will get an offer to proceed with studies at the university that they have chosen. Since not all student come from the same state or country as their educational institution, most of their necessities will be brought when they reach their university. Most of the students like to decorate their room to make they feel like in their home. They will buy the extra items to decorate their room become more beautiful or buy the extra needs to make sure that they can study in comfortable situation. Some of them will buy the transport such as bicycle, motorcycle, or car to easy and fast to go to the class, meetings, or discussions etc.

However, some students might afford to buy all their needs because of their family economy. Therefore, used things from the seniors such as buckets, hangers, toiletries, plates, notes, printer, stationery, small tables, or study lamp etc will help a lot as it come with a cheaper price compare to the store. On the same page, students who finishes their study can lighten their load as they can sell some of their item to the juniors.

1.3 Problem Statement/Research Problem

The problem that annually faced by the students in their final year studies and will be graduate is to find a way to minimize their belonging to bring home especially for those who lives far away from the university, specifically Universiti Malaysia Sarawak (UNIMAS). Since some of the students go back to their hometown by flight, they might bring a certain amount of their belonging without exceeding the limit weight set by the airline company. If exceeded, charges may apply. As most of the airlines company maximize their client carrier up to 60 kg in the cargo and 7 kg as

a hand carry, the passengers need to find another alternative to fit into the guidelines prepared by the airline company.

Thus, the easiest and fastest solution is to dispose of their item by letting it go to their junior. Some of them just leave their item at the hostel or at the dumpster if they cannot be able to find people to hands them down. When the juniors look at the dumpster, they will feel aggrieved with senior action about do not pass their item to them or others because it is such a waste if the item is thrown away meanwhile it is still in good conditions. Therefore, this will increase the number of rubbish and the environment will be dirty.

1.4 Aim and Objective

- To design a web-based system that acts as a platform to sell student's belongings.
- To develop a web-based system that has the functionality to sell student's belongings.
- To test the system by verifying performance and functionality before deployed to users.

1.5 Methodologies

Methodology is the model that illustrate the pre-set guideline and description of methods characterized to effectively complete development of a project. For this project, Rapid Application Development (RAD) Methodologies is used. RAD Methodologies is an iterative approach where is open to changing requirements over time and encourages constant feedback from the end user is shown as Figure 1.0 as below:

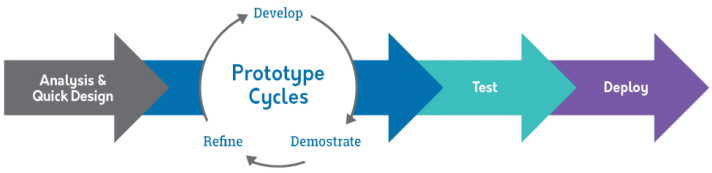

Figure 1. 0: Rapid Application Development Methodology

In analysis and design phase, the detailed requirement of the system will be analysed and gather the information from the users by conducting the online survey. The next phase will be design of interface, system, and database that are prepared from the requirements of the previous phase. The

design of interface will be using a software called Just in Mind. For prototype cycles, it is iterative phase. In develop phase, it involves coding which will create the functionality and scheduling iterations for deployment. The web-based system is developed using Laravel, a platform that support PHP framework. The database that used is MySQL. In this case, FYP supervisor will review the system and refine accordingly also gather the feedback from the users. If project is not meet requirements, the new iterative will start again. After done develop the system, it is tested to ensure all the functionality is run properly and meet the requirements. After the testing, the system will deliver to the users.

1.6 Scope

This web-based system is a platform designed to help the students to dispose of their item and belongings. The users in this system are the students which have two character which are who want to let go the item or get the item. This system will not include more details about students where the students just need to fill their name, address, contact number, and the type of item. This system required the students to register first and login to website for them to let go their item. Students who want to grab the second-hand item can view the website without login. This web-based system is only for UNIMAS students.

1.7 Significance of Project

This project would solve the problems that most of students will face when they are in final year students. This web-based system can help all the students get the information about the second-hand item which give a chance to grab it. This web-based system also will prevent the students who try to cheat the price or the quality of the item where it is still in good condition to hand downs. This will prevent the student to leave or throw their item randomly when they can hand downs to the juniors.

1.8 Project Schedule

This is the project schedule is used as a guidance for the progress of the Final Year Project. In completing this project will require Final Year Project 1 and Final Year Project 2. The Figure 1.2 and Figure 1.3 is the Gantt chart of the Final Year Project 1.

	Task Name	Duration	Start	Finish
1	**Final Year Project 1**	**88 days**	**Wed 11/9/19**	**Fri 10/1/20**
2	Brief Proposal	3 days	Mon 30/9/19	Wed 2/10/19
3	Study and research the necessary hardware and software	67 days	Tue 8/10/19	Wed 8/1/20
4	**Project Proposal**	**13 days**	**Wed 2/10/19**	**Fri 18/10/19**
5	Research Project	4 days	Thu 3/10/19	Tue 8/10/19
6	Analyse Project Requirement	2 days	Tue 8/10/19	Wed 9/10/19
7	Determine outline and project scope	3 days	Thu 10/10/19	Mon 14/10/19
8	Determine Methodology	5 days	Mon 14/10/19	Fri 18/10/19
9	**Chapter 1: Introduction**	**6 days**	**Mon 21/10/19**	**Sat 26/10/19**
10	Finaliza project proposal	6 days	Mon 21/10/19	Sat 26/10/19
11	**Chapter 2: Background/Literature Review/State of Art**	**23 days**	**Thu 17/10/19**	**Sat 16/11/19**
12	Review, journals and existing systems	16 days	Fri 18/10/19	Fri 8/11/19
13	Documentation	22 days	Fri 18/10/19	Sat 16/11/19
14	**Chapter 3: Methodology/Requirement Analysis and Design**	**14 days**	**Mon 18/11/19**	**Thu 5/12/19**
15	Requirement collection	6 days	Mon 18/11/19	Mon 25/11/19
16	Analysis and Design	9 days	Mon 25/11/19	Thu 5/12/19
17	**Close project**	**27 days**	**Thu 5/12/19**	**Fri 10/1/20**
18	Submission of FYP 1 Final report & Paper for assessment	5 days	Fri 6/12/19	Thu 12/12/19
19	Submission of Final Report (Softcopy)	21 days	Fri 13/12/19	Fri 10/1/20

Gantt Chart

Figure 1.2: Project Schedule Description

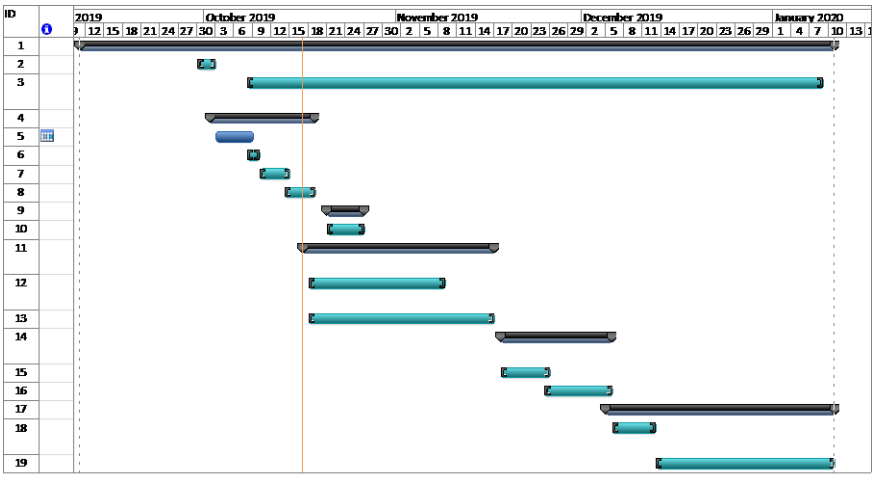

Figure 1.3: Project Schedule Timeline

1.9 Project Outcome

The outcome of this project is the web-based system will help the final year students to promote their item to the other students who are in need. The junior students also know where to find used

item from the seniors and know how to contact them. This platform will benefit all sides as the juniors can get second-hand item from their seniors such as notes, printers, or electronic appliances whereas the senior can lighten their load for their trip. Also, this approach can save the environment as less rubbish will be produced. This web-based system is a user-friendly system whereas students could easily to understand how to use it. This project can deliver all the functions in the web-based system and can be done properly during the timeline.

1.10 Project Outline

1.10.1 Chapter 1: Introduction

Chapter 1 is the introduction of proposed of the project. The chapter is required of background of the project, comprehensive of the problem statements, objective of study, the methodology used, scope of the project, significant of project, project schedule, and expected outcome of the project. The problem statements are challenges that faced by current situation and justifies with the development of this project. The objectives are clarifying the project's goal that expected to achieve the end of development. Scope is limitations of the system and who is the target users.

1.10.2 Chapter 2: Literature Review

This chapter is discussed about the existing system and techniques that similar to the propose of the project. Limitation of the existing systems and methods of improved will be analyzed by presenting the comparison of the features. This overall study will be done by research of articles, journal or any related information to the propose of project. At the end of the chapter, a brief description on the technology tools and the software utilized for the execution of this project.

1.10.3 Chapter 3: Requirement Analysis and Design

This chapter is described the methodology that used to develop the entire of this project. The methodology that used as a model is Agile Methodology. At the end of the chapter, comprises

of UML (Unified Modeling Language) diagrams and class diagram to express the system's database design.

1.10.4 Chapter 4: Implementation

This chapter discusses about the implementation of the proposed system. The interface design of the proposed system will be presented so that it is easier to understand the layout of the system proposed. The tools used for implementing and the overall system purpose will be clarified so that a clear view of the system can be shown.

1.10.5 Chapter 5: Testing

This chapter discusses about the testing of the proposed system. The proposed system 's purpose will be tested as a completed system to make sure the system requirements are met. A user test is performed and in this chapter the feedback has been analysed and discussed.

1.10.6 Chapter 6: Conclusion and Future Works

A conclusion about the proposed system is prepared. Other than that, future enhancement is being defined on the proposed system developed.

Chapter 2: Literature Review

2.1 Introduction

In order to ensure the objectives of the project can be achieved, a literature review is carried out before proceeded with the developing phase. This chapter is discussed about the existing system and techniques that are similar to the proposed of the project. This overall study will be done by the research of articles, journal or any related information to the proposed of the project. Through the review, processes are to understand how the currently existing systems work. The essential functions and features of the system that satisfies the current markets can be identified. The imported screenshots of the existing systems are included in this section. Limitation of the existing systems and methods of improved will be analysed by presenting the comparison of the features.

2.2 Overview of Objectives

The main objective of the project is to design and develop a web-based platform to dispose of the item and the juniors know to get second-hand item. The other objectives:

- To design a web-based system that acts as a platform to sell student's belongings.
- To develop a web-based system that has the functionality to sell student's belongings.
- To test the system by verifying performance and functionality before deployed to users.

Every workplace will use internet access and become one of a common need for them. Because of this, the users of the web-based system become wider and become important tools for business. For the business, it might be for selling or promoting their products/services, give information about any sales or event/trip, etc, or writing out blogs. This can potentially lead to an increase in their sales, increased profitability, and reduced the inefficient (Evergreencomputing.com, n.d.).

"According to Nviro – a leading contract cleaning company in the UK – **ensuring that the college is well maintained is not only conducive to productivity, it also increases the likelihood of attracting more students."** From here we already know that cleaning is important, not only for health but also for safety. An increasing number of students also will increase the number of

rubbishes. The dirty building or dirty environment can affect the studies which do not give uncomfortable environments ("Cleanliness is important to college campuses", 2016).

Let go stuff or second-hand item is a huge market on campus, there are many things can be supplied like stationaries, books or old notes, MP3, hangers, etc. These items have the guaranteed quality and at a low price because both seller and buyer are a student and it is easy to monitor. So, people like to buy second-hand item from the students because giving them high trust. The last year students spontaneously organized second-hand markets annually in China, where to exchange second-hand school materials. They place stalls along the college street as long as 100 meters and become of a tradition. Even some residents nearby the campus join this event. There is a great deal for the graduate students in college every year because they have a lot of personal belongings hard to carry away but it still useful. For the sake of avoiding waste and recycling, let go stuff market is a good way to solve the problem which can bring some economic benefits at the same time ("Secondhand Market And Its Future", n.d.). This is explaining the first objective was to design a web-based system for students to let-go their item and belongings.

In order to create the website, run smoothly, the project must have clearly requirements. This requirement will give the developer ideas to create the system. All the functionality and feature can be create based on the different activities. The functionality of the system will determine the system the percentage of quality. This functionality will be obtained the system that has been developed is user friendly to the users. The functionality will affect the experienced of users where the system is high quality or vice versa. This is explaining the second objective, where to develop the functionality to student’s belongings will affect the experience of the users.

The website needs to develop as an accessible, informative, and user-friendly. Web testing is the process to maintain a quality website. Web testing is a software testing practice when the bug is appearing, this can cause a problem when the bug increases with every life of code and the costs

of bug fixing rise with time. A web-based system needs to be checked completely from end to end before goes live for end users. This explains the third objective, by performing website testing, it can make sure that the web-based system is functioning properly and can be accepted by real-time users (Rueben, et al., 2019).

According to the study of Global Market Insite (GMI), there are 35% of women and 25% of men say there are buying more second-hand products than the new products compared with 12 months ago. GMI European marketing director Ralph risk has said that there will always be a strong second-hand market because people are looking at how they maximize their return on income and it's now such an established marketplace (Chahal, 2019).

2.3 Reviews on Similar Existing System

Nowadays, there exists a lot of popular and well-building let go or second-hand item systems. Every student might have some item that they need to let go of. In order to solve this problem, UNIMAS students are using media social to let go of their item. Then, this section will be discussed about the other existing system such as Letgo, Carousell, and Vinted.

2.3.1 Media social viral – WhatsApp and Facebook

Media social is one of the most people used for this day. Social media refers to websites and apps - designed to allow people to share content quickly, efficiently, and in real-time. Many of the people or the way of some business used media social because of the ability to share events, opinions, photos, etc in real-time has transformed the way we live (Hudson, 2019).

For university students, they will face to adapt to the new environments like need to find new friends, adapt to new places, or adapt the teaching-learning, etc. Students also need to know or communicate with each other because of to discuss some of the assignments or projects, events faculty, or college and many.

Based on this, the usually UNIMAS students do are they will make some groups by using WhatsApp for them to keep in touch, for example, the college's group, housemate group, faculty

group and many. This because easy for them to keep in touch or easy to give or viral information. In the case of final year study, to get the person to pass down their item is by asking the nearby people if they are interested in their item. If the nearby people are not interested, they will be viral on social media, usually, they will use WhatsApp or Facebook. This is because easy for them to find the juniors who are needs the second-hand item.

The problem is not all UNIMAS students are in the same group especially in WhatsApp's group, so some of the juniors will miss the information about second-hand item. The same goes to the final year student, they will face the problem if they cannot get the person to pass down. Below is shown how UNIMAS students promoted or let go of their item to others. They will spam all the groups that have UNIMAS students until getting the buyers or just throw away if no one wants to grab it.

Social media viral

The figure below shows UNIMAS students' viral second-hand item by using WhatsApp:

Figure 2.1

Figure 2.2

Figure 2. 1 & Figure 2. 2: WhatsApp image for UNIMAS students viral their item

Figure below shown UNIMAS students' viral second-hand item by using Facebook:

Figure 2.3 *Figure 2.4*

Figure 2.3 & Figure 2.4: Facebook image for UNIMAS students viral their item

After viral all the social media that they have. They will wait for the other students who are interested to grab their item. If they are no one responds, the other solution is they just throw away even though the item is in good condition. The figure below shows that the item that has been left and throw away from previous students:

Figure 2.5 *Figure 2.6*

Figure 2.7

Figure 2.5 & Figure 2.6 & Figure 2.7: Image for UNIMAS students throw away their item and give uncomfortable conditions

For using WhatsApp, all country is available to use it except for North Korean, China, Cuba, United Arab Emirates, Iran, and Syria(Lawrence, 2019) while for using Facebook apps all countries are available except for China, Cuba, Iran, Syria, North Korea, Bangladesh, Egypt, Mauritius, Pakistan, and lastly Vietnam (Index on Censorship, 2019).

2.3.2 Letgo

Letgo is a simple and basic mobile app and website. Letgo is offered to sell or buy the item in the local place. This website is one of the best concepts that want their mobile sales application to work efficiently and quickly. The premise for this app is simple and easy where just snap a photo of your item, then post it to the website or app, chat or talk with the buyers, and close a transaction and get paid fast and easy. This app also offers to set the seller's location feature where it makes it easier for the buyers to buy their products (O'Connell, 2018).

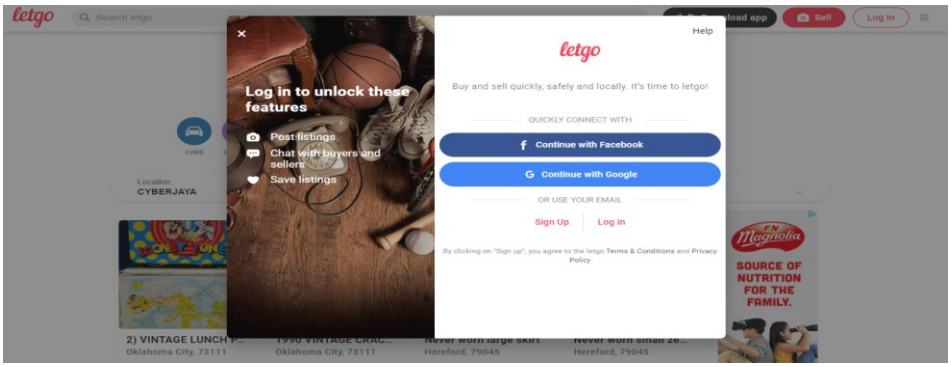

Figure 2.8: LetGo's login page